ARTICLE III.

NOTES OF A WILD GARDEN.

By G. U. Hay.

(Read before the Society, December 7th, 1897.)

About ten years ago the idea occurred to me of planting a wild garden in which should be shown, as far as the conditions would warrant, the peculiarities and extent of the flora of New Brunswick. The garden plot covers an extent of nearly two acres and is well adapted for the purpose intended. It is situated about eleven miles from the city, on a broken piece of ground overlooking the St. John river. In one corner is a meadow, made up of alluvial deposit brought from the neighboring hills, and adapted for plants usually found on intervales. Through this meadow flows a small stream fed by springs on the hills which lie to the westward. The idea of planting a native arboretum was first suggested by finding in this meadow a group of small trees and shrubs eight in number, forming a pretty little arbor on the bank of the curving stream. The plants consisted of the cedar, the white and yellow birch, American ash or rowan-tree, water alder, mountain maple, balsam fir and black spruce. One could stand in the centre of this arbor and touch one-tenth of all our forest trees and shrubs. When nature had made such a beginning it was surely a broad hint for me to do the rest.

When the remainder of the two acre plot came to be explored, possibilities were found to exist for something more than an arboretum; and the idea of a wild garden gradually came, which might include most of our flowering plants, all our native ferns, and perhaps in time a representative gathering of our mosses, lichens and fungi. Rising from the meadow toward the south, within the bounds of the plot, is a hill whose slope is covered with a young but quite ample growth of spruce, fir, birch, maple, etc., the deciduous trees largely prevailing, and giving to the soil each year an abundant supply of leaf mould. Half way up this hill, in the centre of the grove, is a depression which

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catches the drainage of the slopes around it. The moist ground, cool shade, and northern exposure of this basin, forms an ideal spot for a fernery.

Thus there were provided a meadow and a grove, two very neces sary adjuncts of a wild garden.

Crossing an intervening open space toward the south after leaving the grove, the top of the hill is reached. Here stands an aged white pine, the only survivor of a fire which swept over the place some years before. The blackened trunk, and upper branches extended imploringly, tell of its struggle for life On this knoll the soil is dry and poor, covered with a growth of small trees and heath plants. This is called Heath Hill. On the continuation of this knoll to the east stands a small summer cottage overlooking the St. John river and the Nerepis hills to the north. Sloping from the cottage toward the river is a cultivated field in which and along its borders may be placed those plants requiring full exposure to sunlight.

In this garden there have been about five hundred native species of flowering plants and ferns, many of which were *in situ*, while others have been planted during the last ten years; of these about ten per cent. have disappeared, or failed to grow through lack of proper conditions or the perils incident to long transportation, as the transfer of plants has been made chiefly in the summer months; so that not quite one-half of the flowering plants of the province can be seen in this space of nearly two acres. But little progress has been made in planting the grasses, sedges, rushes, and aquatic plants. The results in regard to the latter are especially disappointing, although considerable labor has been expended on them. The (at times) turbulent little stream has shown no disposition to be led into quiet ponds or stretches of pool. It has even carried away—root, stem and branch—the plants placed too confidingly within the limits of its bed, and all attempts to secure its co-operation, or at least a passive non-resistance in the scheme, have resulted in failure.

There is a larger representation of ferns in the garden than any other class of plants. Nearly all of the forty species and varieties found within the limits of the province were living and flourishing during the past summer. The trees and shrubs are also very well represented. Out of the eighty species found in the province, more than sixty are growing and in good condition, and in a short time I hope to have a complete representation of our forest trees and shrubs

Four years ago, Dr. Saunders, of the Experimental Farm, s
me over one hundred plants representing, chiefly, the trees a
shrubs of Western Canada and a few northern European species. Th
have been planted on the borders of the cleared spaces of the gar
and are kept quite distinct from the native species. They, with
number of others, sent from Point Pleasant Park, Halifax, includi
the Heather *(Calluna vulgaris)* have grown very well, although l
little care has been given them. These will serve for comparison w
similar native species as well as to illustrate the effect of our clim
upon them.

Little or no attempt has been made to put plants in rows or b
according to their classification, the chief aim being to provid
natural habitat and surroundings as far as possible. The only
ception to this was the treatment of weeds, a colony of which,
prudential reasons, I placed in a row beyond the pale of other pla
With a perversity characteristic of their tribe, they spurned s
treatment and refused to grow.

Another family which does not take kindly to cultivation is
Orchids. Many of these, of which we have so many beautiful nat
species, affect a solitary habit and are found in bogs. Others love
rich mould of deep sheltered woods. Others such as the Calyp
are rare or local in their occurrence.

In the future, I hope to present to the Society at the close of ea
season, a few notes embodying the results of observations, especia
on the rarer species and those less susceptible of "cultivatio
together with the time of coming into leaf, flower or fruit of certa
species of plants, which on account of their commonness have b
generally accepted as the basis of observation. In making such obs
vations, there is a great value in watching for results on the sa
spot of ground or the same plant, or one quite near it, from year
year. This I have endeavored to do after being assured that t
plant has adapted itself to its changed conditions, and had been lo
enough in the garden to be relied on to furnish correct data. In t
results recorded below, I have not hesitated to go outside the gard
to make observations on plants more favorably situated for comi
into leaf or bloom early, always choosing the same locality, and
the case of perennials, the same plants from year to year.

The observations recorded below have extended over a period
ten years, from 1889 to 1898, inclusive. They are not so complete

I would wish, as my visits were generally confined to one day each week (Saturday) in the months of April and May. I give the results here, however, as they may be useful for comparison with those to be made later, which I hope will be fuller and extending through whole seasons.

Observations in Wild Garden and Adjacent Fields, Ingleside, Kings Co., N. B.

1889.

May 4. Plants in bloom: Adder's-tongue (Erythronium Americanum), Mayflower (Epigæa repens), White Violet (Viola blanda), Gold-thread (Coptis trifolia), Bellwort (Oakesia sessilifolia).

May 11. Purple Trillium (Trillium purpureum), Painted Trillium (T. erythrocarpum), Grove Anemone (A. nemorosa), Spring-beauty (Claytonia Virginica), Hobble-bush (Viburnum lantanoides), Blue Violet (Viola cucullata), June-berry (Amelanchier Canadensis), Strawberry (Fragaria Virginiana).

May 17-20. Rhodora (Rhodora Canadensis), Blueberry (Vaccinium Pennsylvanicum), Painted Trillium, Hobble-bush, Red Cherry (Prunus Pennsylvanicum), Shad-bush (Amelanchier botryapium).

(Hereafter the common names of plants alone will be given except where species different from those above are named.)

1890.

May 3. Mayflower (blooming beside the snow banks on the barrens), Adder's-tongue (just beginning to open).

May 17. Adder's-tongue (in full bloom), Bellwort, Purple and Painted Trilliums, Blue and White Violets, Gold-thread, Red Maple (Acer rubrum.) Mayflowers still abundant on barrens.

May 23-26. Adder's-tongue, Blue and White Violets, still abundant. June-berry, its pure white petals making a beautiful contrast with the delicate green of the unfolding leaves of surrounding trees; Service-berry, Strawberry, Hobble-bush, Grove Anemone.

1891.

May 2. Mayflower, Adder's-tongue. (A few in bloom).

May 9. Adder's-tongue (in full bloom), White Violet, one Blue Violet.

May 15. Trees still leafless. Weather dry. Cold and backward.

May 23. Trees (White Birch, Poplars and Maples) just coming into leaf, and fully expanding in the next two days under the influence of warmer weather. In bloom—Strawberry, Blue Violet, Red-berried Elder (Sambucus racemosa), Gold-thread.

1892.

April 2. No signs of leaves or flowers unfolding. Plenty of snow in hollows, but day warm and bright.

April 18. Willow and Alder catkins beginning to shed pollen, Adder's-tongue leaves above ground. Very cold north winds.

April 30. Mayflowers in full bloom on barrens. Cold north winds continue.

May 7. Adder's-tongue (in full bloom), White Violet, Mayflower, Sweet Coltsfoot (Petasites palmata).

May 14. Bellwort, Grove Anemone, Blue and White Violets.

1893.

April 29. Hepatica triloba (planted the previous year) beginning to bloom beside a snow bank.

May 13. Mayflower, White Violet, Adder's-tongue, Selkirk's Violet (Viola Selkirkii, Hepatica, Red Maple.

May 20. Blue Violet, Grove Anemone, Bluets (Houstonia cærulea), Spring-beauty, Gold-thread, Bellwort, Blossoms of Red Maple falling, White Birch and Poplar trees unfolding their leaves.

1894.

April 28. Hepatica (in bloom), Alder and Willow catkins elongated and beginning to shed pollen. Patches of snow still visible in clearings and hollows. Adder's-tongue leaves above ground; a few flower buds visible. Mayflower has been in bloom for ten days in exposed places on the barrens. Strawberry (a few scattered blossoms).

May 12. Bloodroot (Sanguinaria Canadensis), Blue flowers of Hepatica falling with white in full bloom. The Purple and Painted Trilliums, White and Blue Violets, Bellwort, Star-flower (Trientalis Americana), Red Maple, Dandelion, Strawberry, in full bloom. Flower buds of June-berry and leaf buds of Red Cherry and White Birch ready to open. Frost out of ground and gardening commenced.

1895.

April 20. Weather warm and sun bright, with south-west wind. Catkins of Alder shedding pollen. Leaves of Adder's-tongue above ground. (No further observations this year on account of absence.)

1896.

April 24. Season dry with cold winds from March, continuing to the middle of May. Flowers of Alder shedding pollen.

May 1. White Violet, Hepatica, and Red Maple, in bloom, with a few flowers of Adder's-tongue.

May 8–11. Adder's-tongue, Blue Violet, Dandelion, Strawberry, Bellwort, Ground Ivy (Nepeta glechoma), Grove Anemone.

May 15. June-berry, Blueberry, Purple and Painted Trilliums, Hobble-bush, Blue Violet, Dandelion, Marsh Marigold (Caltha palustris), Bluets

May 22. Red Cherry, Elder, Starflower, small flowered Crowfoot (Ranunculus abortivus).

1897.

May 7–10. Weather for first three weeks cold, with east winds and rain, with an occasional warm day. Hepatica, Adder's-tongue (only a few in flower), White Violet, Red Maple, Hazel (Corylus rostrata), Alders, Willows, Poplars, in full flower in shaded places,—in exposed places fading, with pollen shed; Butterwort (Pinguicula vulgaris) with leaves extended in rosettes. This plant, with such northern ferns as Woodsia hyperborea, W. glabella, Pellæa gracilis, and others, were brought from the Restigouche, 200 miles farther north, the previous season, and were among the first in the garden to unfold their leaves and fronds.

May 14–19. Adder's-tongue (in full bloom), Painted Trillium (a few), White Violet (abundant), Blue Violet (a few), Grove Anemone, Bellwort, Gold-thread, Strawberry (beginning to flower), Mayflower (in shade), Marsh Marigold.

May 21–25. Bluets, Hobble-bush, June-berry, Purple Trillium, Dandelion, Ground Ivy.

May 30. Nodding Trillium (Trillium cernuum), False Mitrewort (Tiarella cordifolia), Rhodora, Red Cherry, Elder, Dandelion, Strawberry.

1898.

April 23. Season cold and backward, although the fine weather of February and March promised an early spring. Frost still in ground and cold east winds prevail. Mayflower (in bloom), Adder's Tongue with leaves above ground.

May 7. Hepatica and Red Maple (in full bloom), Alder and Poplar catkins shedding pollen, a few Adder's-tongue, Blue and White Violets (in bloom).

May 14. All the flowers named above in full bloom, with Bellwort, Grove Anemone, Bloodroot, Leatherwood (Dirca palustris).

May 20. Purple and Painted Trilliums, June-berry, Service-berry, Ground Ivy, Gold-thread, Spring-beauty, Marsh Marigold, Blue Cohosh (Caulophyllon thalictroides), Hobble-bush. Trees just leaved out: White Birch, Amelanchier, Poplars, Red Maple, Lilac, Mountain Ash, Red and Black Cherry. Buds just breaking: Horse Chestnut, Black Ash.

May 24. First Red Cherry blossoms, Gray Birch (Betula populifolia) just coming into leaf, Red Oak, Linden, (Tilia Americana), Elm, Sumach (Rhus typhina) bursting their buds.